

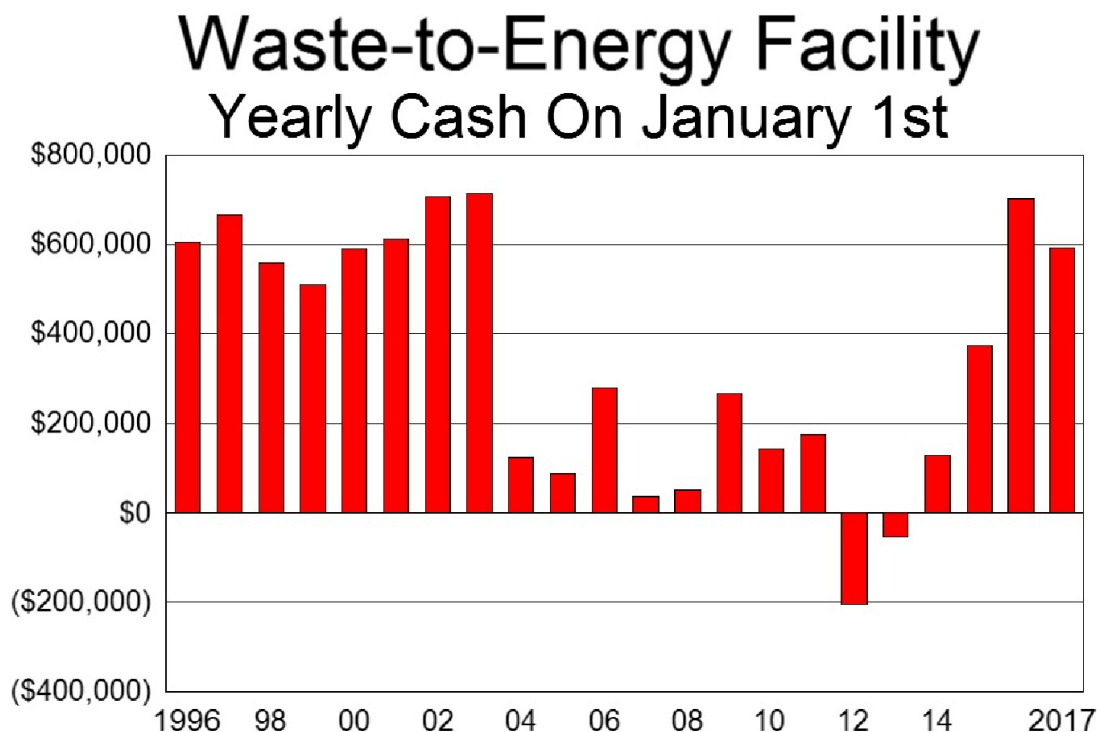
## **Barron County Board of Supervisors Questions**

Responses Provided by ZAC, Incorporated

May 11, 2017

1. [What has been the profit or loss in the 30 years the facility has operated?](#)

**ZAC:** As an enterprise fund, the Facility must operate at a revenue neutral state over time allowing for reasonable capital and operational reserve funds.



2. [What are the bond payments for the next five years?](#)

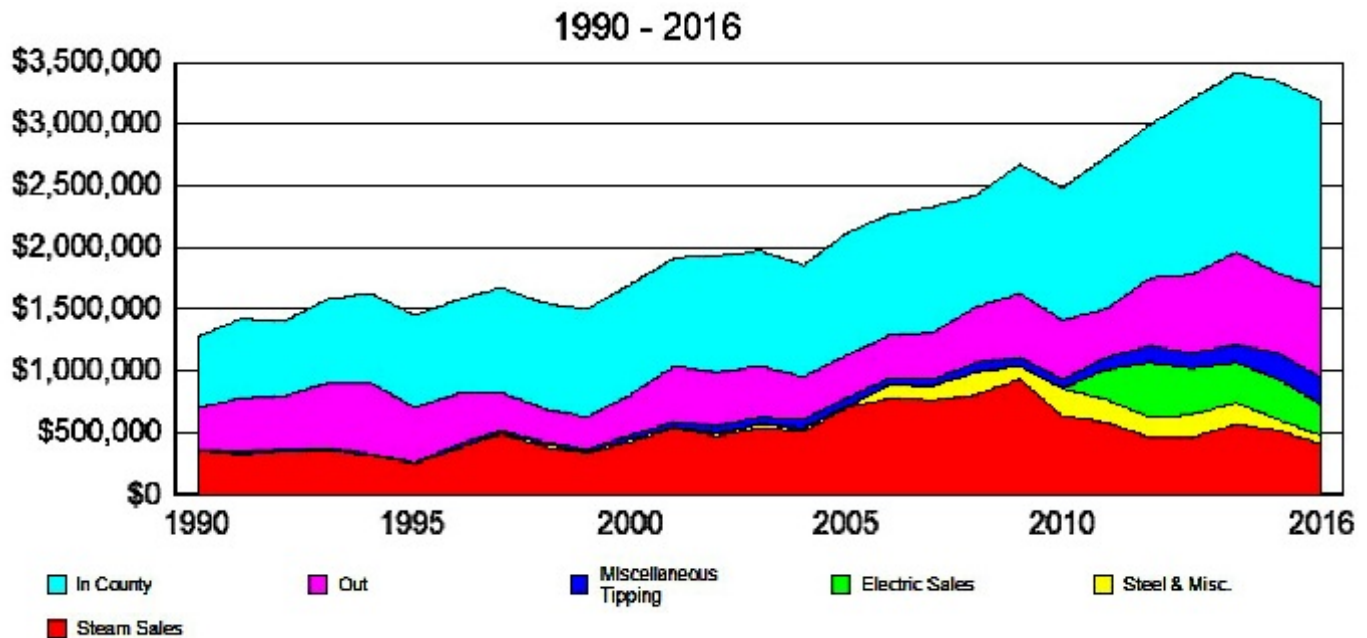
**ZAC:** **Defer to data provided by County Staff.**

Admin:	2016-2022:	Principal	Interest	Total
		\$ 1,605,000	\$ 299,765	\$ 1,904,765

3. [What has been our profit on steam sales?](#)

**ZAC:** **Past Steam Agreements have been based on the avoided cost of natural gas with discounts allowed for either volume or high gas prices. Defer amounts to County Staff.**

Admin: It is difficult to calculate profit on one revenue source however, total steam sales, 1989 to 2015, equaled \$ 13,514,256.



4. [Estimated cost of upgrading the old facility?](#)

**ZAC:** Upgrading the existing 100 ton per day facility is estimated from \$6 to \$12 million dollars depending on the details of the remodeling, level of front-end separation and expected performance.

5. [Estimated cost of building new?](#)

**ZAC:** A new 100/110 tpd plant would cost approximately \$12 to \$14 million dollars.

A new 135/150 tpd plant would cost approximately \$16 to \$18 million dollars.

A new 270/300 tpd plant would cost approximately \$32 to \$35 million dollars.

Limited front-end processing is included in the above costs for all three scenarios. The corresponding waste receiving rates would be 110 tpd, 150 tpd and 300 tpd.

6. [Can we raise tipping fees to cover costs?](#)

**ZAC:** **Defer to data provided by County Staff.**

**Admin:** Yes, however this would require a modification to the Flow Control Ordinance, FCO. On May 1st, tipping fees will be raised to the allowable FCO, maximums

7. [Should we have contracts with several new cities and/or towns before doing anything?](#)

**ZAC:** As part of the planning for any significant project, additional contracts with new users would be required to back the required long-term financing.

8. Do we have room on our property to stay in business with the old facility as we build new?  
**ZAC:** Yes.
9. Can we use any part of the old facility to save money?  
**ZAC:** Yes. Essentially all of the existing buildings and structures may be reused with minor exception to accommodate the new equipment layout.
10. Should we have a Committee to tour LaCrosse, Hennepin County, etc.?  
**ZAC:** Yes, we believe the knowledge gained would be invaluable.
11. It would appear the 300 ton option is a dead issue unless some kind of flow control or tipping fee incentives are possible?  
**ZAC:** Agreed, unless several conditions change.
12. It appears the two viable options are the current 100 ton and the 135 ton option?  
**ZAC:** Estimated capital improvement costs for the three scenarios are as follows:  
100 tpd \$ 6 million (reuse existing facility)  
135 tpd \$ 10 million (reuse existing facility)  
225 tons per day (3 units utilizing exist plant configuration) \$ 22 million  
270/300 tpd \$ 32 million (new)  
Recommended Configuration: As large of a facility for which waste can be secured (preferably utilizing existing location).
13. The per parcel assessment should be investigated for operating revenues?  
**ZAC:** Defer to data provided by County Legal Staff.  
Admin: The per parcel assessment, if approved by Wis. Dept of Revenue, can only be used for capital asset purchases, as allowed by State Statutes
14. Serious consideration should be given to increasing tipping fees before the per parcel assessment is used.  
**ZAC:** The Barron County Flow Control Ordinance would need to be amended by the County Board of Supervisors as the tipping fee rate limit has been reached.
15. We should enter into a long term contract with the cheese plant for supplying steam energy?  
**ZAC:** Yes, if there is a compelling reason such as securing financing. Term is normally a negotiated item which both parties hopefully become comfortable with during the negotiation process. If length of contract is vital for one party, the other may take advantage of the fact to compel concessions in other areas. We have seen numerous times where both parties flip positions on term during the negotiations.

16. Can the air permit be lengthened beyond its' five year life?

**ZAC:** No, this is a federally mandated period, however the permit stays in place while the renewal permit is being crafted and approved. Albeit unusual, our last permit lasted 12 years. No significant rule changes are expected since no new technology exists at this time.

17. Can the County secure a "flexible" air permit allowing for per-ton variations in the tons burned per day?

**ZAC:** Changes may be made at permit renewal or other times with a construction permit, however, each permit specifies a maximum tons per day.

18. Can or will the Wisconsin DNR work with the County as a Champion for the continued operations of the plant?

**ZAC:** All current WDNR staff that we interface with seem very to extremely positive about our project and WTE in general. WDNR is an independent agency that theoretically would remain an advocate for state and federal policy. Current United States, Wisconsin, EU, UN and Barron County policies advocate for waste-to-energy verses land-filling and promote an "Integrated Approach" to solid waste management.

In fact, USEPA states that Waste to Energy is "on par" with recycling and the European Union says they are equal in environmental protection. In fact some countries have banned land-filling of waste with more than 5% carbon content.

19. Could we rebuild in place with a 150 ton per day facility by installing more efficient burners and boilers?

**ZAC:** Yes, the existing two incinerator trains currently rated at 50 tons per day each would be replaced in the in the same configuration with two 75 tpd units one at a time while maintaining one in operation. Related construction and installation work would need to be completed to accommodate the new units.

20. Is there a third or alternate way to install a third burner that is more efficient?

**ZAC:** There are a limited number of techniques to derive more energy from the existing units by design technique but the return on the investment is poor. The most cost effective way is to add a third unit is to install it parallel and adjacent to the two existing trains on the south side of the plant. This configuration can accommodate three unit 225 tpd option of or the 270/300 tpd option. Again, related construction and installation work would be need to be completed to accommodate the new units.

21. Should the County pursue selling/giving the plant to Saputo?

**ZAC:** Defer to County Staff. We believe Saputo Cheese, USA concentrates on making the finest cheese in the world and try not to stray far from that endeavor.

22. What is or can be done to address the water content in the ash?

**ZAC:** There are several keys to achieving cost effective dewatering. Notably they are as follows:

- Maximizing surface area contact with dry ambient air
- Mechanical agitation of ash with cylinder/trommel and/or conveyors
- Ash pile depth, configuration and time frame
- Maintain lower humidity by drawing drier ambient air through the ash.

Higher tech, higher cost ash removal equipment such as presses and centrifuges are not cost effective for Barron County. An aggressive system may reduce the water content in the ash from 45% down to 30% at a capital cost of approximately \$175,000.

23. What is or can be done to address not disposing of the ash, i.e. recycling into other products.

**ZAC:** For over 30 years we have stayed close to many pilot or actual beneficial reuse projects. To be viable a re-use project needs to meet environmental concerns of the State and owner and be economically feasible. To date no projects have proved to meet this criteria and therefore disposing of ash in a mono-fill remains the best practice. We will continue to search for beneficial options.

24. When was the last time a municipality or private hauler committed to transport waste to our WTE Facility?

**ZAC:** The last Contract was with Clayton. All of our contracts are long-term and/or automatically renew. All Barron County waste is directed to the Facility by the Flow Control Ordinance or the 30 year Flow Control Contract with Rice Lake. We are unaware of any municipality stopping use of the Facility once they have started. Waste supply from out side of Barron County (all voluntary) has ranged from 16% to 34% over the years averaging 24% and was 27% last year. We have recently picked up new customers to supply waste predominately in winter months when it is most needed.

25. How much did that increase our Tons Per Day, TPD?

**ZAC:** Nominal: Brought up to 100 TPD. While not all waste is controlled or under contract, the Facility currently has waste to meet or surpass it's capacity all year.

26. Who is currently actively making contact with potential clients in an attempt to secure more waste?

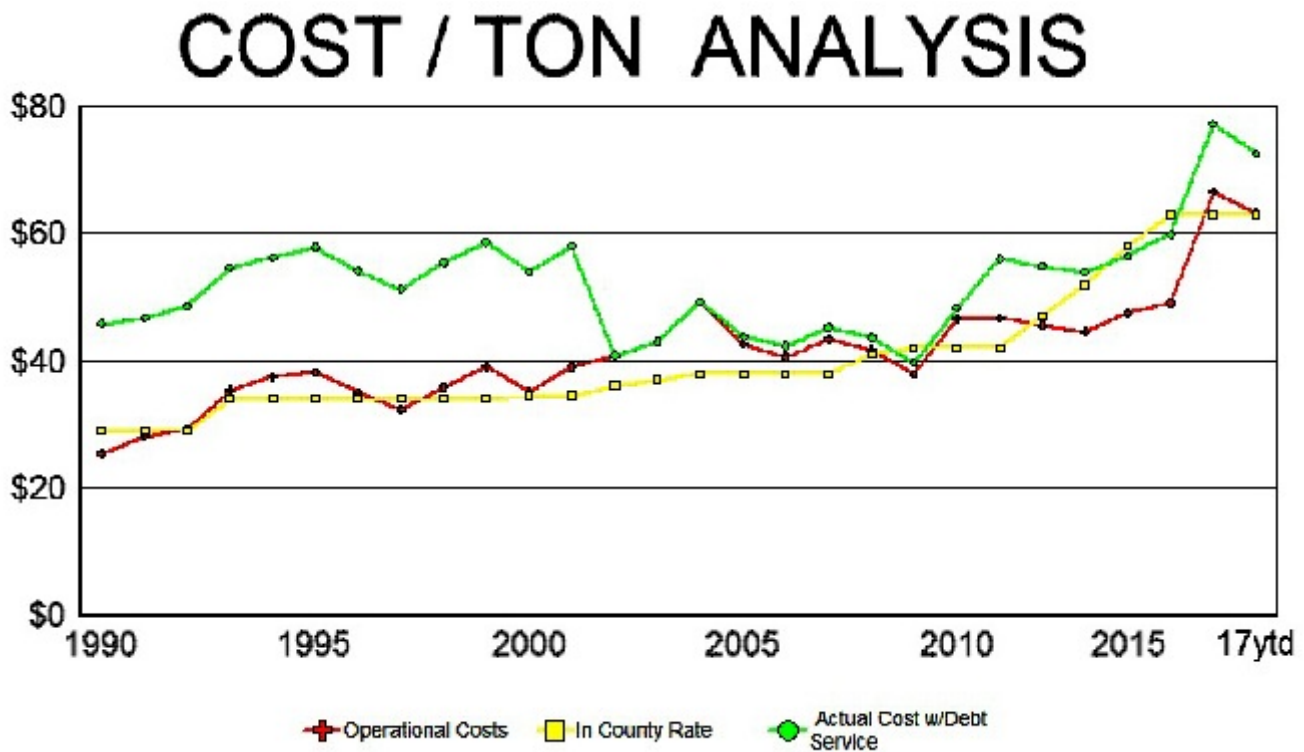
**ZAC:** Primarily Al Zeltner with assistance from other Facility Staff when they are contacted.

27. Are there any realistic parties indicating a definite interest in switching to our facility and if so when can we reasonably expect a firm commitment and what would be the projected TPD?

**ZAC:** In the past 5-6 months there has been a flurry of interest from various waste markets at attractive rates. In some cases these parties are in rather desperate need of incineration of their products for environmental, legal, required destruction or desired destruction purposes. We attempt to take maximum advantage of these situations.

28. The WTE Cash on Hand is at a critical level with a real potential of being further eroded as a result of a new stack being mandated along with other equipment and structures that may fail at any time. Simple question - how do we stop the bleeding with any degree of certainty beyond shutting the facility down?

**ZAC:.** There are no certainties, just varying levels confidence. Currently, as in the past, revenues at the WTE Facility have been expected to carry nearly all of our integrated solid waste management program costs even though WTE operations is not nearly all of the expense. To date these revenues have covered expenses, however, due to recent natural gas prices, a downturn in metal markets, and an aging Facility, these revenues are falling short. Different scenarios provide different outcomes, however we estimate the program will require \$1,000,000 to operate for the next 5-8 years. Annualized, we believe this is comparable to the non-incineration expenses that the general facility revenues have been covering in the past.



The current down-turn in cash position starting in 2016 has been caused by a combination of factors both planned and unplanned. It is related to low steam revenue due to natural gas prices, low electrical revenue due to turbine repair downtime, low steel revenue due to markets, planned and unplanned repairs expenditures such as new steam line and air upgrades. Some of these issues are recovering to various degrees and some are lingering into 2017. Determining where these items are going forward is paramount to successfully providing a financial recovery plan.

29. The bond can be paid off in 2018. If we shut down prior to the stack upgrades, where would we find the cash for bond repayment and dismantling the facility?

**ZAC:** The Facility would have to be decommissioned and re-purposed or torn down in a reasonable time frame. (3-5 years) Otherwise we agree with and/or defer to County Staff.

Admin: The bonds can be paid off by using General Fund Unassigned Fund Balance or raising the levy because they are, essentially, are general obligation bonds. Dismantling the facility may not be necessary, we could expand the recycling plant and sell whatever assets are not needed. In my opinion it's a very big leap to go from shutting down to dismantling a plant, the City of Red Wing, MN, didn't tear down their WTE Facility.

30. It's hard to imagine why anyone would want to buy the facility but if there was some interest, is selling even legal?

**ZAC:** It is possible there is a market at a low price. It is certainly legal to sell. While Flow Control may complicate revenue. However, given the fact that 27% of the waste is currently coming from a changing open market it should not be assumed that the Facility would fail under private ownership. See answer to question 24.

31. Disregarding environmental concerns, if waste haulers were to haul to landfills because there was no longer a WTE, is there any projection as to what would happen to residential and business garbage rates?

**ZAC:** There is no reason to believe garbage rates would significantly increase or decrease since monthly home garbage rates are comparable to those in areas served by landfills. Total fees charged at landfills for typical area haulers are comparable to Barron County rates. This is further evidenced by the fact that many independent haulers, businesses and individuals use the Facility when they are often free to use any landfill.

Low land-fill rates would be available only to their owners and very large haulers. For a private non-affiliated company or county to receive these rates they would likely have to operate a transfer station which would eat up most or all of the savings. Dunn County for example operates a county wide system and transfer station and receives one of the lowest land-fill tip fees around, however to cover their overhead they charge rates comparable to Barron County.

The question is understood, however we do not believe it is possible to disregard all of the environmental benefits of waste-to-energy. Comparing the two is like comparing a Hummer to a Prius or a race car, they all carry people, but....

32. Is there any hope of receiving garbage from the City of Rice Lake?

**ZAC:** This is a myth we have been unable to dispel, as the City of Rice Lake directs all of their waste to our Facility whenever we ask. There may have been isolated unauthorized diversion cases in the past, however we have no evidence that any significant waste is currently being by-passed by their contracted hauler unless we direct them to do so. Rice Lake has been very accommodating since the Flow Agreement was signed.

33. What impact, if any would shutting down operations have on Saputo?

**ZAC:** Saputo would likely have to add boiler capacity and staff to operate and maintain it. Cost is debatable, however, we would estimate that depending on gas prices and many other factors, their costs would increase approximately 20%. Also, their steam and much of their electricity would no longer be green.

34. If we were able to increase to 135tpd, would Saputo be buying the additional energy created?

**ZAC:** The additional energy would be used by Saputo if needed or turned into green electrical power.

35. With the likely closing of Moccasin Mike Landfill, what possible inducement is there to entice St. Louis County and other northern sources to ship to us?

**ZAC:** Unsure. Considering the fact that roughly 25% of our waste comes from the open market (mostly municipal) with little or no marketing efforts, we believe it to be likely that some additional municipal waste supply would be likely and would have to be pursued if expansion is considered. We currently have approximately 120 tons available 6-8 months of the year.

We would like to thank the Barron County Board for the opportunity to meet and discuss this very important issue.

-Al Zeltner and Jerry Corrick, PE